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(11) **EP 1 517 366 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
17.05.2006 Bulletin 2006/20

(51) Int Cl.:
H01L 21/768 (2006.01)

(43) Date of publication A2:
23.03.2005 Bulletin 2005/12

(21) Application number: **04104237.5**

(22) Date of filing: **02.09.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL HR LT LV MK

(30) Priority: **16.09.2003 US 663948**

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(54) **Dual depth trench termination method for improving cu-based interconnect integrity**

(57) A trench is formed in a low K dielectric (100) over a plurality of vias (120) also formed in the low K dielectric layer (100). The vias are separated by a distance of less than X_v and the edge of the trench is greater

than X_{TO} from the edge α of the via closest to the edge of the trench. The trench and vias are subsequently filled with copper (150), (160) to form the interconnect line.

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EUROPEAN SEARCH REPORT

Application Number
EP 04 10 4237

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2003/148604 A1 (LIN MOU-SHIUNG ET AL) 7 August 2003 (2003-08-07) * paragraphs [0091] - [0099]; figures 16-26 *	1-3,6-8,10	H01L21/768
X	US 2002/011671 A1 (SHIMIZU MASAYUKI) 31 January 2002 (2002-01-31) * paragraphs [0049] - [0061]; figures 3H-3K,4 *	1,2,5-7,10	
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 27 March 2006	Examiner Ploner, G
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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